

**Figure 1.**

- Family of enzymes that cleave penicillins and cephalosporins very efficiently
- A well characterised isoform is the 29 kD TEM-1 Beta-lactamase
  - 3D structure
  - Hydrolysis mechanism
  - Substrates and inhibitors
- Plasmid encoded ampicillin resistance gene from *E. coli*

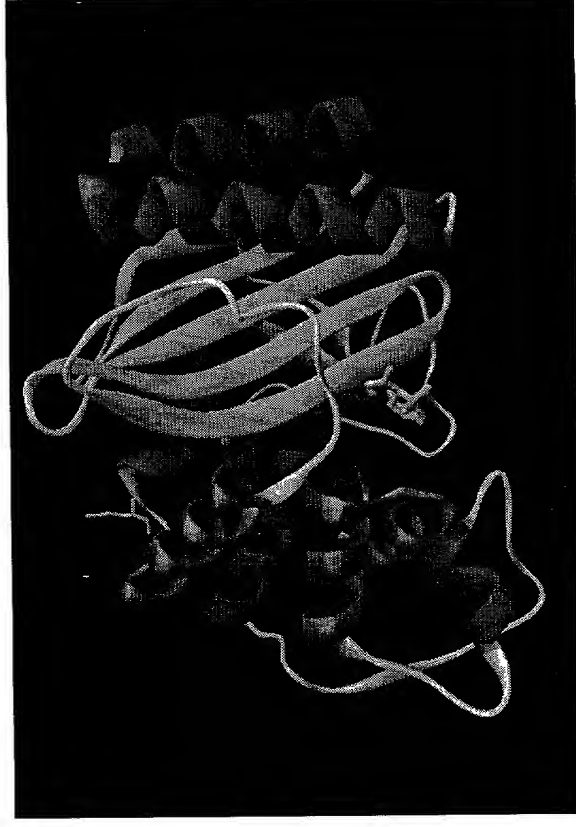
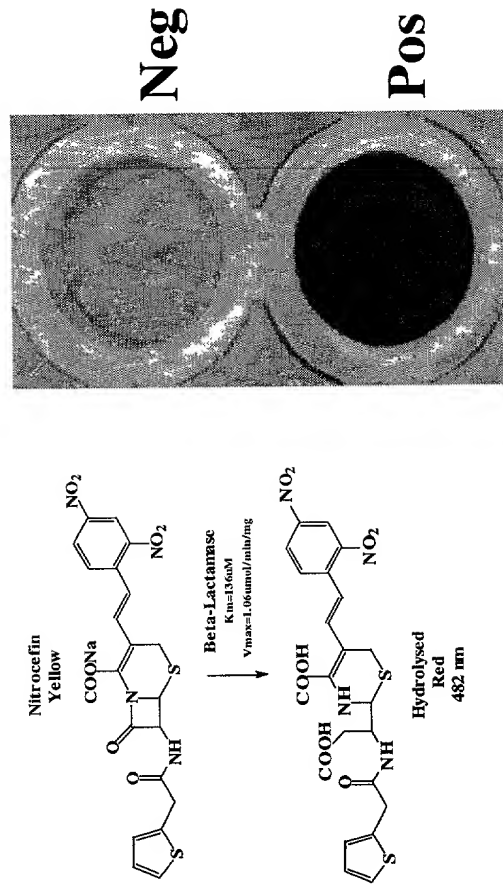


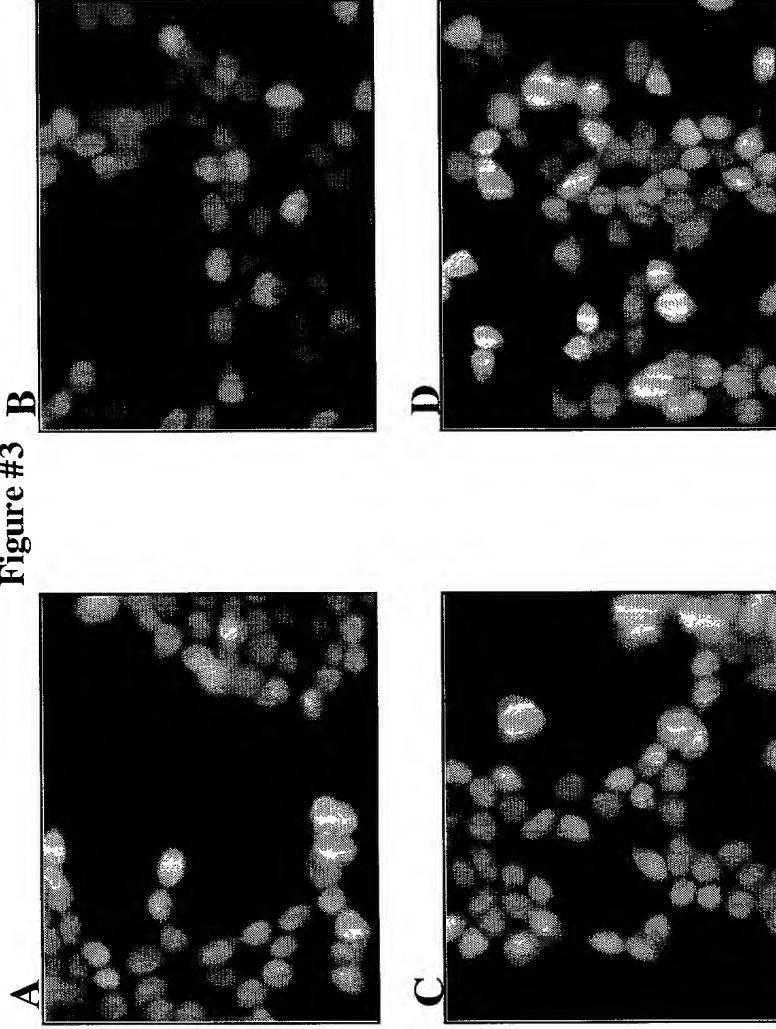
Figure #2



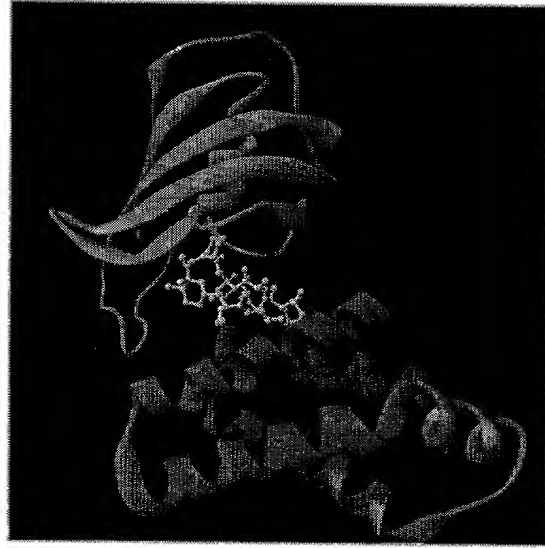
2A

2B

Figure #3

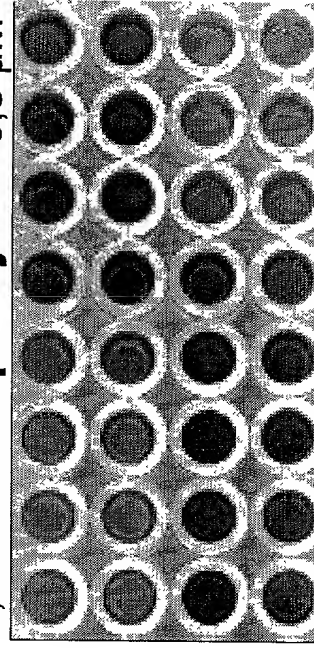


# FKBP/FRB Domain Figure #4



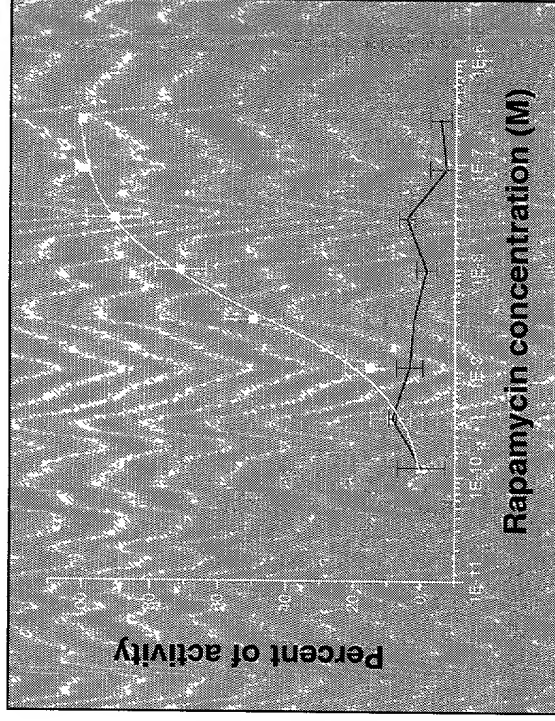
**A**

0,15 nM Rapamycin 0,3  $\mu$ M

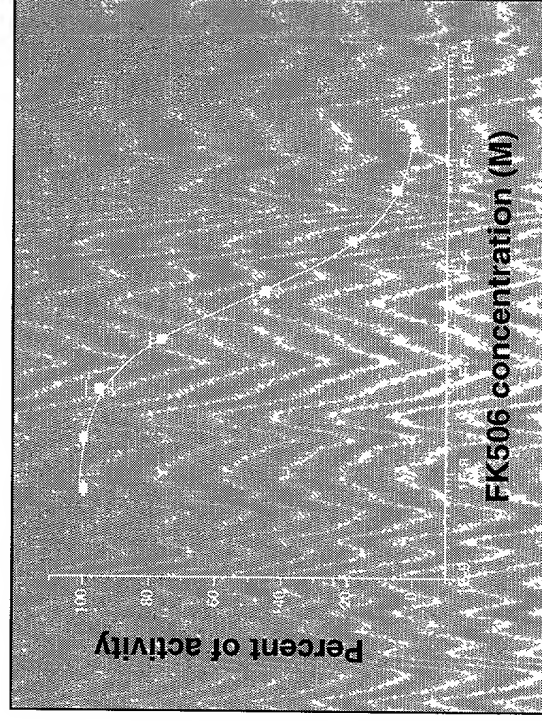


6,9 nM FK506 15  $\mu$ M

**B**



**C**



**D**